

IN THE CLAIMS

Claims 1 through 21 are all shown as currently amended.

LISTING OF CLAIMS

1. (currently amended) An individual individual cell for a fuel cell comprising: first and second electrode layers; ~~and separate~~ gas inlets dedicated to each of said electrode layers respectively with each gas inlet defining passages within ~~through~~ the cell in direct contact with the electrode layer to which each gas inlet is dedicated for enabling gas transfer through the electrode layers with said electrode layers having first and a second porosities; ~~and further comprising~~ a solid electrolyte layer located between said first and second ~~the two~~ electrode layers with each of the electrode layer, ~~the two~~ electrode layers ~~comprising~~ consisting of an anode and a cathode, and with at least one of the two electrode layers having at least a first compact zone with a third porosity which is lower than the porosity of the electrode layer in which the first compact zone is located, wherein the first compact zone is a protuberance of the electrolyte layer extending which extends from the electrolyte layer into said electrode layer for forming an area of low porosity disposed adjacent the gas inlet dedicated to the other electrode layer and wherein said protuberance forms an internal seal creating a self-tight fuel cell

architecture.

2. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 1 wherein the first electrode layer has a first thickness and said first compact zone has a thickness identical to the first thickness.

3. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 1 wherein the second electrode layer comprises at least a second compact zone with a fourth porosity, the fourth porosity being lower than the second porosity.

4. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 3 wherein the second electrode layer has a second thickness, and a second compact zone has a thickness identical to the second thickness.

5. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 4 wherein the first electrode layer has a first thickness, and a first compact zone has a thickness identical to the first thickness.

6. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 3 wherein said a second compact zone is a protuberance of the electrolyte layer.

7. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 1 also comprising at least one bipolar plate adjacent to an electrode layer.

8. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 7 comprising two bipolar plates adjacent to each electrode layer.

9. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 7 wherein the bipolar plate has a coefficient of thermal expansion higher than the coefficient of thermal expansion of the adjacent electrode layer and the electrolyte layer.

10. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 9 wherein the bipolar plate is connected to the adjacent electrode layer by nesting.

11. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 10 wherein the bipolar plate comprises at least a protuberance and the adjacent layer comprises a cavity, said protuberance of the bipolar plate and the cavity fitting one into the other.

12. (currently amended) An individual ~~Individual~~ cell for a fuel cell

according to claim 11 wherein the cavity is located in a compact zone ~~(11)~~ of the electrode layer.

13. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 12 wherein the cavity is located in a protuberance of the electrolyte layer.

14. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 11 wherein the cavity is larger in width and/or in depth than the width and/or height of the protuberance of the bipolar plate.

15. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 11 comprising a plurality of cavities.

16. (currently amended) An individual ~~Individual~~ cell for a fuel cell according to claim 1 further comprising at least a first gas inlet dedicated to the cathode such that the entire area of the anode adjacent to said first gas inlet is a compact area of the anode and/or further comprising at least a second gas inlet dedicated to the anode such that the entire area of the cathode adjacent to each second gas inlet is a compact area of the cathode.

17. (currently amended) A fuel ~~Fuel~~ cell comprising a stack of cells according to claim 16, each cell being separated from its neighbor by a

bipolar plate.

18. (currently amended) A fuel~~Fuel~~ cell according to claim 17 with a circular plane geometry.

19. (currently amended) An individual~~Individual~~ cell for a fuel cell comprising an anode layer, a cathode layer, a solid electrolyte layer located between the anode layer and the cathode layer, and having separate gas inlets dedicated to each of said electrode layers respectively with each gas inlet defining passages within~~through~~ the cell in direct contact with the electrode layer to which each gas inlet is dedicated for enabling gas transfer through the electrode layers, a bipolar plate adjacent to each of the anode and cathode layer, having at least one protuberance extending therefrom with~~each of the anode and cathode layer comprising a dense zone having a thickness equal to the thickness of the corresponding anode and cathode layer, the porosity of the dense zone being larger than the porosity of the corresponding anode and cathode layer, the dense zone comprising a cavity in which the wherein a corresponding protuberance of the adjacent bipolar plate can fit.~~

20. (currently amended) An individual~~Individual~~ cell according to claim 19 comprising gas inlets for one of the anode and cathode located in

dense zones of the other anode and cathode.

21. (currently amended) An individual ~~Individual~~ cell according to claim 1 wherein said first compact zone includes the electrode layer with said ~~third porosity is composed of the densified material from which the electrode~~ including the said compact zone is made.